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SCIENCE

NEW YORK, AUGUST 19, 1892.

THE BIRD ON ITS NEST.

BY MORRIS GIBBS.

ALTHOUGH many interesting points in relation to the nesting habits of our friends, the birds, have appeared, I have yet to see anything concerning the position which the prospective parent assumes while incubating. The subject has been of much interest to me, and in the past years many observations have been made, which plainly indicate that the proprietors of nearly all nests "have their exits and their entrances." Many there are, as the kingfishers, wood-peckers, and other species, which reach their eggs by a single opening or burrow, and these of necessity must emerge from the same source; but all seem to have a well-defined position in sitting, as we shall see.

All can remember the attitude of the domestic hen, turkey, or goose, and how rarely this position is changed; and with the wild bird the tendency to a shift is even less, for with barn-yard fowls we can alter their posture by placing a board in a variety of positions about the nest, but with the inhabitants of the wood any interference generally results in desertion. The robin when building her nest often tries how her brooding breast is to fit the growing structure, and this, too, when a bare, flat platform gives no indication of the elevated sides to follow. Later, the male sits in the forming cup, and speculates, probably, on the outcome of his efforts, and views the outlook from the crotch. During the four days of egg-laying the female is not on, or rather in, the structure to any extent, unless the weather is cold or wet, and she assumes almost any position. It is only after the duties of incubation begin, a period which lasts fourteen days to a dot, that the robins adopt a standard, shared in by each of the pair. The male, who shares in the duties of sitting, when going to take his turn, almost invariably flies towards his mate in the same path, and arriving at the back door, just as his feet are about to touch the edge, the female is seen to dart forward between the branches which comprise the front door. This front door, as I prefer to call it, is then really the exit, and toward it the incubating bird always points her bill. It never directs toward the tree-trunk, and generally points towards an open space in the foliage when in a thick-leaved tree or bush.

With all birds, so far as I am able to learn, the exit is a point of observation for the sitter, from which it can get a view of friends and foes. The owls and hawks from an elevated position can command a fine view of the surroundings. With all aquatic birds the sitter almost invariably occupies a position presenting toward the water. Shore birds, as the sandpipers, rest on their nests in a position to best view the stream or pond. Rails and gallinules face the water, the latter usually building so that they can plunge from their homes directly into their favorite channels. The loon, who builds, or rather forms, its nest away out from shore in a mass of vegetable matter, usually the foundation of an old muskrat's house, invariably faces the open, deep water. From

that position it can slide into the lake at a second's notice. Anyone can prove this position of the loon by examining the premises when the owner is away. The nest proper is merely a trough-like depression, evidently formed by the bird's efforts at hollowing, rather than in building up the sides. This oblong depression is a foot and a half long and over ten inches wide, and the eggs are always placed from three-fifths to two-thirds of the distance from the front end.

In a large number of nests of the brown pelican, which I examined on an island in Indian River, Florida, all gave evidence that the old birds sat in one position, usually with the front to the water. It was interesting to note, that, although the very young birds, which occupied many of the nests, assumed no regular position, the larger young nearly all presented towards the shore.

In the case of ruffed grouse and quail, the position occupied while on the nest is invariably that which gives the best view of the surroundings from the more or less concealed retreat. Who ever heard of a grouse's nest where the old bird faced into the brush pile or toward the stump or log?

The arboreal sparrows, vireos, and many other smaller birds usually sit upon nests built on horizontal limbs, with the head from the trunk, and when the nest is much elevated the position is usually chosen so that the sitter will face the prevailing wind. Birds will nearly always, when on or off the nest, face the wind; and, if observations are taken, nearly all birds on the nest will be found in one position if a strong wind is blowing.

FOOT DEFORMITY AS THE RESULT OF UNSCIENTIFIC SHOES.

BY W. M. L. COPLIN, M.D., AND D. BEVAN, M.D.

IN approaching the subject of scientific foot-dress, one of necessity combats the traditions, experiences, and fashions of centuries. If we are to judge of the foot coverings handed down to us as relics from the courts of France, Spain, England, and Germany, we can but conclude that for an extremely long period of time, probably eight or ten centuries, the dressing of the human foot has been, even in the so-called civilized countries, but slightly different, and only in degree, from the customs of the followers of Confucius for thousands of years. Fortunately for art, unfortunately for the history of civilization, so called, the artist of olden as well as modern times has not copied, except in portraiture, the cramped foot, the narrow toe, the elevated heel, and the pinched instep, which have long accompanied the human foot. It seems reasonable to suppose, however, that the Roman artist and critic, and the Grecian as well, fully attempted to give us the perfect foot as found in the well-developed Grecian woman of the day. The sandals worn at the time when Rome was in her splendor were undoubtedly so constructed as to afford ample opportunity for the development of the foot, and exhibit the beauty of its conformation. The gladiators, if we are to judge of their physique by the rude representations which are handed down to us from their times, trained in extremely loose-fitting sandals, and